

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A ~~manufacturing method of~~ method of manufacturing a fuel cell, ~~which comprises cell having~~ a hydrogen-permeable metal layer ~~of a hydrogen-permeable metal~~ and an electrolyte layer ~~that is located~~ disposed on the hydrogen-permeable metal layer, ~~and has proton conductivity, said the manufacturing method comprising:~~

forming ~~a thin~~ an electrolyte layer on the hydrogen-permeable metal layer, wherein the electrolyte layer has pores; and

forming a conductive layer on the ~~formed thin~~ electrolyte layer ~~electronically-discontinued with~~ such that a portion of the conductive layer formed on the electrolyte layer is discrete from a portion of the conductive layer formed inside the pores of the electrolyte layer. ~~the hydrogen permeable metal layer via the pores, wherein the conductive layer has electrical conductivity.~~

2. (Currently Amended) A ~~manufacturing~~ The method in accordance with of claim 1, wherein the conductive layer is an electrode.

3. (Previously Presented) A ~~manufacturing~~ The method in accordance with of claim 1, wherein ~~said the~~ forming a conductive layer is implemented by releasing a conductive material toward ~~the thin~~ the electrolyte layer in a direction perpendicular to ~~the thin the~~ electrolyte layer, ~~so as to form layer such that~~ the conductive layer ~~that is~~ is formed thinner than ~~the thin~~ the electrolyte layer.

4. (Currently Amended) A ~~manufacturing~~ The method in accordance with of claim 1, wherein ~~said the~~ forming a conductive layer is implemented by releasing a conductive material toward ~~the thin~~ the electrolyte layer at ~~a specific~~ an angle that prevents the conductive material from being deposited ~~on surface~~ on a surface of the hydrogen-

permeable metal layer, which is exposed ~~on the~~ by the pores present in the thin of the electrolyte layer, ~~so as to form the conductive layer.~~

5. (Currently Amended) ~~A manufacturing~~ The method in accordance with of claim 3, wherein ~~said the~~ forming a conductive layer is implemented ~~by adopting using a vacuum deposition technique to form the conductive layer.~~

6. (Currently Amended) ~~A manufacturing~~ The method in accordance with of claim 1, wherein ~~said the~~ forming the conductive layer further comprises:

forming a dielectric layer in the pores ~~present in of the thin~~ the electrolyte layer, wherein the dielectric layer is ~~mainly made~~ made primarily of an insulating material and blocks off a connection between ~~surface the surface~~ of the hydrogen-permeable metal layer, ~~which is exposed on the pores present in the thin electrolyte layer,~~ and an area outside of the pores; and

~~coating the thin~~ the electrolyte layer and the dielectric layer ~~formed in the pores of the thin electrolyte layer with the conductive layer.~~

7. (Currently Amended) ~~A manufacturing~~ The method in accordance with of claim 6, wherein ~~said forming a the~~ forming the dielectric layer is implemented by filling the pores of ~~the thin the~~ electrolyte layer with dielectric fine particles to form the dielectric layer.

8. (Currently Amended) ~~A manufacturing~~ The method in accordance with of claim 6, wherein ~~said forming a the~~ forming the dielectric layer is implemented by ~~coating~~ coating an inside of the pores of ~~the thin the~~ electrolyte layer with an insulating material by ~~plating to form the dielectric layer.~~

9. (Currently Amended) ~~A manufacturing~~ The method in accordance with of claim 6, wherein ~~said forming a the~~ forming the dielectric layer further comprises:

~~coating~~ coating the inside of the pores of ~~the thin the~~ electrolyte layer with a metal, which is oxidized to an insulating material, to form a metal coat layer; and

oxidizing the metal coat layer to form the dielectric layer.

10. (Currently Amended) ~~A manufacturing~~ The method in accordance with of claim 1, wherein ~~said forming a~~ the forming the conductive layer further comprises:

filling the pores ~~present in of the thin~~ the electrolyte layer with fine particles;

forming the conductive layer on ~~the thin~~ the electrolyte layer having the pores filled with the fine particles; and

removing the fine particles from the pores, subsequent to ~~said forming the~~ forming the conductive layer on ~~the thin~~ the electrolyte layer.

11. (Currently Amended) ~~A manufacturing~~ The method in accordance with of claim 10, wherein ~~said removing the~~ removing the fine particles is implemented by ~~adopting using a chemical technique to remove the fine particles.~~ technique.

12. (Currently Amended) ~~A manufacturing~~ The method in accordance with of claim 10, wherein ~~said removing the~~ removing the fine particles is implemented by adopting a physical technique to remove the fine particles.

13. (Currently Amended) ~~A manufacturing~~ The method in accordance with of claim 1, wherein ~~said forming a~~ the forming the conductive layer further comprises:

forming a protective layer to cover ~~the thin~~ the electrolyte layer; and

forming the conductive layer on the protective layer.

14. (Currently Amended) ~~A manufacturing~~ The method in accordance with of claim 13, wherein ~~said forming a~~ the forming the conductive layer further comprises:

removing the protective layer and fixing the conductive layer to ~~the thin~~ the electrolyte layer.

15. (Currently Amended) ~~A manufacturing~~ The method in accordance with of claim 13, wherein the protective layer is ~~mainly made~~ made primarily of an insulating material having proton conductivity.

16. (Currently Amended) ~~A manufacturing~~ The method in accordance with of claim 1, wherein ~~said forming a~~ the forming the conductive layer is implemented by coating ~~the thin~~ the electrolyte layer with particles of an electrically conductive material having a ~~greater particle diameter~~ greater than a width of the pores ~~present in of the thin~~ the electrolyte layer, so as to form the conductive layer. layer.

17. (Currently Amended) ~~A manufacturing~~ The method in accordance with of claim 16, wherein ~~said forming a~~ the forming the conductive layer is implemented by ~~adopting using~~ one of arc ion plating, emulsion deposition, and cluster beam deposition techniques to coat the thin electrolyte layer with the electrically conductive material. techniques.

18. (Currently Amended) ~~A manufacturing~~ The method in accordance with of claim 1, wherein ~~said forming a~~ the forming the conductive layer is implemented by applying a paste, which contains an electrically conductive material and has a predetermined level of viscosity for effectively preventing invasion of the paste into the pores present in the thin electrolyte layer, onto ~~the thin~~ the electrolyte layer, so as to form the conductive layer. layer.

19. (Currently Amended) ~~A manufacturing~~ The method in accordance with of claim 1, wherein ~~said forming a~~ the forming the conductive layer further comprises:

forming a conductive film ~~of an electrically conductive material; and~~ film; and
transferring the conductive film onto ~~the thin~~ the electrolyte layer, so as to form the conductive layer. layer.

20. (Currently Amended) A fuel cell comprising a hydrogen-permeable metal layer ~~of a hydrogen permeable metal and an thin and an~~ and an electrolyte layer that is located disposed on the hydrogen-permeable metal layer ~~and has proton conductivity.~~ layer.

~~said the~~ the fuel cell being manufactured by a ~~by the~~ manufacturing method in accordance with of claim 1.

21. (Currently Amended) ~~A manufacturing~~ The method in accordance with of claim 1, wherein the pores are through-holes.